

# The Transformation of Learning Ideology in the New Curricular Objectives

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**Abstract:** The establishment of the “three-dimension-in-one” objectives in the new curriculums has changed the “knowledge-centered” objective model in the traditional teaching syllabuses. This change will cause the transformation of knowledge learning ideology, i.e. from stressing the explicit knowledge acquisition to concerning the value of tacit knowledge. In return, the transformation of knowledge learning ideology will shed great influence on teaching processes, learning styles and assessing standards.

**Key words:** new curricular objective; explicit knowledge; tacit knowledge

The establishment of the “three-dimension-in-one” objectives in the new curriculums has great significance on the curricular reform of elementary education. The objectives of new curricula stress students’ coordinated development in three fields, i.e. “knowledge and skills”, “processes and methods”, “feelings, attitude and concept of value”, thus they change the knowledge-centered objective model in traditional teaching syllabus. The traditional teaching syllabus pursues knowledge acquirement and accumulation; they mainly focus on students’ achievements; therefore, their objectives are outcome-oriented. Whereas the new curricular objectives concern more about the learning processes and stress the value of learning processes themselves; they are process-oriented objectives. It would be a great breakthrough in the curricular reform of elementary education that curricular objectives transfer from “one-center” to “three-dimension-in-one”, from the objectives of achievements to those of processes. This essential transformation will have great influence on every aspect in education<sup>1</sup>. If viewed from the perspective of knowledge ideology, the transformation of curricular objectives will cause the transformation of learning ideology, i.e. from stressing the explicit knowledge acquisition to concerning the value of tacit knowledge. In return, this change will shed great influence on teaching processes, learning styles and evaluating standards. On the basis of defining the two kinds of knowledge (i.e. explicit knowledge and tacit knowledge) and their relationships, this paper tries to explore the significance and influence of the transformation of curricular objectives.

## 1. Two Kinds of Knowledge and Their Relationships

Polanyi once pointed out: “Human possesses two kinds of knowledge. The knowledge that people often

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<sup>1</sup> Liqun Liu. (2004). *From Outcomes to Processes---on the Transformation of Knowledge Ideology and the Establishment of New Curricular Objectives in China*. Journal of Education Science (Hunan University), (7)

referred to is just the form of knowledge which is expressed in written form, such as letters, maps or math formula; while there is another kind of knowledge that can't be expressed systematically, for example, some knowledge about our own behavior. If we call the former one explicit knowledge, then the latter can be called tacit knowledge.”<sup>2</sup> Explicit knowledge is objective and tangible; it can be reflected clearly and expressed in speeches or letters. While tacit knowledge can't be explained logically by speeches, written letters or semiotics; it is highly individualized, hard to formalize and is based on one's whole experience; it only can be perceived by one's intuition but can't be taught by verbal instruction; even the owner of the knowledge couldn't express it clearly. Therefore, neither it can be imparted by formal ways such as school education and mass media, nor it can be reflected or criticized by way of reasoning. Hence, tacit knowledge is often neglected in regular school education, but it does exist in our daily life. Polanyi indicated that both non-verbalized and verbalized knowledge exist universally in our daily life as well as in scientific activities. In terms of quantity, the former is even much more than the latter, as it seems that it is uncountable. Both of them constitute the whole of human knowledge. As for this recognition, Polanyi has once summarized in refined words like this: “What we know is more than what we can tell.”<sup>3</sup> Accordingly, school education, a way of imparting human knowledge and enlightening human intelligence has to care the value of abundantly existed tacit knowledge while disseminating and renovating the explicit knowledge.

## **2. Learning Ideology Guided by Traditional Curricular Objectives---mastering Abundant Explicit Knowledge**

Under traditional curricular objectives, we emphasized that students should reach “double bases” standard, i.e. “basic knowledge” and “basic skills”. Under the guidance of these objectives, students had to master a large amount of textbook knowledge, which is the so-called explicit knowledge. Explicit knowledge can be imparted by education, but in teaching processes, there exists not only explicit knowledge, but also much tacit knowledge. If its existence and influence are ignored, the tacit knowledge will have effect on teaching activities automatically. Thus the tacit knowledge which is beneficial to teaching activities may not be used effectively, while the tacit knowledge which is harmful to teaching activities may intervene in and obstruct the progress of teaching activities. Because it is under the pressure of external forces (e.g. disciplines, exams and job-hunting etc.), by virtue of sheer logic power and diligence that students knew well but have not really understood or internalized the knowledge in textbooks. As a result, there will be two irrelevant knowledge systems in their minds: one is explicit knowledge in curricula, another is tacit knowledge which is opposite to the first kind. For example, after knowing that force is the cause that alters objects' motional state, and believing that force is the cause for objects' motion, a student may feel contradicted and confused about the two definitions on force. Evidently, knowledge disintegration in student's minds is harmful to the truly mastering and understanding of explicit knowledge in curricula. For a long time, this kind of education has brought forth the phenomenon of “high score and low ability”. “High score” means that they still applied their tacit knowledge as those who never be educated or not be educated at the same level. That by making students master the basic knowledge and skills of every subject to realize the objective of “knowledge and skills” is simply to master explicit knowledge in every subject. Only this single objective can't help to realize the balanced and all-round development of students' body and mind; it is unfavorable for the cultivation of

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<sup>2</sup> Zhongying Shi. (2001). *Knowledge Transformation and Education Reform*. Beijing: Education Science press

<sup>3</sup> Polanyi, M. (1966). *The Tacit Dimension*. London: Routledge & Kegan Paul. 4

students' creative power and innovative consciousness; and finally it is detrimental to the nurturing of qualified talents.

### **3. Learning Ideology Guided by New Curricular Objectives --- Concerning the Value of Tacit Knowledge**

The new curricula have established the “three-dimension-in-one” objectives, among which, “knowledge and skills” objective is consistent with the “double bases” objective in traditional teaching syllabuses; it concerns the mastering of explicit knowledge. “Processes and methods” objective aims to get students to acquaint themselves with the processes and methods of scientific probe to learn how to discover and ponder problems, to concern the ways of solving problems, to learn how to learn and to foster creative spirit, practical abilities and so on. Tacit knowledge plays a certain role imperceptibly in the process of exploring, discovering, pondering and solving problems. As a matter of fact, we stress the processes and methods of learning just for the purpose that students may acquire new or remedy their former tacit knowledge while making scientific explorations in their studies. Viewed from its nature, tacit knowledge has the characteristic of “situational quality”, “cultural quality” and “gradational quality”. “Situational quality” means that the acquisition of tacit knowledge is always closely related to certain particular problems or tasks. In this sense, tacit knowledge is simply a kind of intuitional comprehensive grasp of those particular problems, tasks and situations, and its role can't be separated from one's reoccurrence and analogy of the problems and situations. “Feeling、 attitude and concept of value” objective aims to make students form positive learning attitude, sound and inspiring attitude towards life, correct world outlook, wholesome outlook on life and value, full of scientific spirit, and finally become citizens with strong sense of responsibility and historical missions. But can we realize this objective simply by inculcating knowledge into students' mind? Can we enhance students' moral level just by telling them to memorize many codes of ethics? Of course, we can't. For instance, students know that they shouldn't litter skins of fruit and scraps of paper over the floor, but in reality, this phenomenon is really very common. While doing scientific researches, we know that we must seek truth from facts and set up scientific spirit, but there are still some people who invent data and plagiarize others' research fruits, so on and so forth. This amounts to say that many people know the rules but not all of them can observe them in real life. Only when these codes of ethics, these positive feelings、 attitude and concept of value are really internalized by people, can they play their roles and have effect on people automatically, and can we say this objective is ultimately come true. Just like a man learns to ride a bike, though he knows a lot of explicit knacks that other people told him before, they are not enough for him. While riding, he must really understand and apply these knacks in person, and discover many other new knacks which can be perceived only by those who participate in it. Without understanding and application of these knacks which is hard to analyze, one can't learn to ride at last. “Feeling, attitude and concept of value” require us to break away from our former understanding of learning, which believes that to learn is to master lots of explicit knowledge in textbooks; They get us to concern more about the value and function of tacit knowledge while training students' human attainments.

### **4. The Influence Produced by the Transformation of Learning Ideology and Its**

## Countermeasures

### 4.1 Teaching Processes: from “Inculcation” to “Communication”

From the perspectives of explicit knowledge and tacit knowledge, teaching processes are not only the processes of imparting, mastering and criticizing explicit knowledge, but also the processes to test, revise and apply explicit knowledge.<sup>4</sup> Teachers should overcome the cramming method while teaching, so that the teaching processes may become processes in which free and sincere dialogues between teachers and students as well as between students themselves are conducted. Only under this atmosphere can students bring up their views or confusions about the teaching materials or some problems, and teachers can help them understand some abstract explicit knowledge in teaching materials and correct their potential wrong opinions about some questions. Because students come to class not only with their eyes, ears and good memory, but also with lots of tacit knowledge accumulated from somewhere in their life. They bring “children’s math”, “children’s physics”, “children’s literature”, “children’s economics”, “children’s philosophy”, “children’s history” and so on into classrooms. Most of them are tacit or potential knowledge and they are the thinking modes about math, physics and other subjects that children acquired from their life experience. Therefore, teachers should change their conception that they are simply imparters of explicit knowledge, and that students exist just as “ignorant” entities or “immature” cognitive subjects. To teach is not only to get students to obtain indirect experience or explicit knowledge with the help of their direct experience, but also to make them examine, criticize and revise direct experience with the help of their indirect experience or explicit knowledge so that direct and indirect experience, explicit and tacit knowledge can be truly united, the “knowledge disintegration” phenomenon in students’ minds and the problem of “high score and low ability” in real life can be solved thoroughly.

### 4.2 Learning Style: from “Passive Reception” to “Active Construction”

In order to reach the “double bases” objective and get high score in exams, students usually tend to learn by mechanical memorization or by doing lots of exercises. Seemingly, students have acquired much knowledge in this way, but since much knowledge hasn’t been comprehended or internalized, thus we are always hearing in the adult world that “all what we’ve learned at schools has almost gone back to the teachers”. This phenomenon is caused by the “knowledge disintegration” in students minds, because most of what they get from “mechanical memorizing” and “endless exercises” are explicit knowledge, but the tacit knowledge still exists in their minds. The explicit knowledge which is consistent with the tacit knowledge will be well memorized, kept and applied; while that is not consistent or even contradict with the tacit knowledge will be affected or even be distorted constantly. If not being reinforced repeatedly by later teachings or exams, they will be forgotten or become vaguely. If so, how should we avoid the “knowledge disintegration” and get the two kinds of knowledge well combined with each other? To reach this goal, we should change students’ learning styles, i.e. change from “passive reception” of knowledge to “active construction” of knowledge. Constructivism believes that knowledge has the feature of individualization. And the learning ideology of constructivism holds that knowledge can’t be simply imparted to students by teachers or other people, but should be constructed by each student according to his personal experience and the knowledge he already has had. In this sense, students’ learning activities are creative, they must expound what the teacher said according to the knowledge and experience they already have had. That is to say, a substantial and non-arbitrary tie must be established between new learning materials and the

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<sup>4</sup> Zhongying Shi. (2001). *Knowledge Transformation and Education Reform*. Beijing: Education Science press

learners' former experience and knowledge. At this time, the new materials will become meaningful to the learners and the learning itself will become meaningful.

#### **4.3 Assessing Standards: from “Results” to “Processes”**

As new curricular objectives are pluralistic, the assessment objectives for students should also be pluralistic; they shouldn't aim only at students' performance. Various methods should be adopted to evaluate students' changes and progress comprehensively not only in the aspects of knowledge and skills but also in that of feelings, attitude, concept of value, innovative consciousness and practical abilities. The assessor should employ various ways to evaluate students' learning processes and give up the single way of evaluation on outcomes which focus only on students score.<sup>5</sup> Examination, the main assessing standard existed before, mainly centers on the explicit knowledge and tests whether students master it. This standard emphasizes students' achievements only, while overlooks the cause for such achievements. Viewed from the theory of tacit knowledge, in the diagnostic teaching assessments, instead of taking down the places where errors are committed and what knowledge students are short of, teachers should analyze the influence of students' tacit knowledge and cognitive model on their analysis and understanding of problems from their papers, homework and any other thing that may reveal their performance. Because the errors and shortage of knowledge may be caused by certain negative tacit knowledge, only after correcting the negative tacit knowledge in students' minds can the tacit knowledge be well memorized, understood and mastered by students. In addition, the synthesized assessments should stress the “individualization” standard, making every student not only give the correct answers in the summing-up exam but also exert their unique recognition about the question. It is helpful for the ‘improvement of their cognitive ability, especially the creative ability for knowledge. Such a process is not only a process to check students' memorization, reproduction and simple application of the ossified knowledge in textbooks, but also a process that students get to know them and to raise their level of understanding, a process in which their tacit knowledge could be examined, revised and criticized. The guidance from “results” to “processes” sets students free from the fetters of “textbook knowledge” and “exam marks”. So that they could understand, explain, criticize, summarize and even surpass the knowledge present in textbooks with the help of their tacit knowledge. Only when we change the unitary assessing standard in traditional teaching syllabuses can we expect to give full play to students' subjective initiative, to arouse their interests, motivation, and creativity, and finally enhance their overall quality.

#### **References (omitted)**

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<sup>5</sup> Yule Jin. *Ideal and Innovation of New Curriculum Reform*. Beijing: People's Education press